

WHAT IS CLAIMED IS:

1. A dual air flow environmental module for a marking engine, comprising:
  - a plenum having a main air flow chamber, a primary air flow chamber fluidly connected to the main air flow chamber and a secondary air flow chamber fluidly connected to the main air flow chamber, the primary and secondary air flow chambers being located downstream of the main air flow chamber;
  - a wall dividing the primary air flow chamber from the secondary air flow chamber;
  - an air conditioning mechanism that adjusts the thermodynamic characteristics of the air flowing in the plenum;
  - a primary air flow blower that moves air through the main and primary air flow plenum chambers;
  - a secondary air flow blower that moves air through the main and secondary air flow plenum chambers;
  - a controller that operates the primary and secondary air flow blowers to provide balanced primary and secondary air flows in the marking engine.
2. The module of claim 1, wherein the controller operates the air conditioning mechanism to thermodynamically adjust the primary and secondary air flows.
3. The module of claim 1, further comprising a moisture source.
4. The module of claim 1, further comprising at least one heater.
5. The module of claim 3, wherein the controller operates the moisture source to thermodynamically adjust the primary and secondary air flows.
6. The module of claim 4, wherein the controller operates the heater to thermodynamically adjust the primary and secondary air flows.
7. A method of achieving balanced air flows in a dual air flow environmental module for a marking engine, comprising:
  - providing a main air flow plenum chamber, a primary air flow plenum chamber fluidly connected to the main air flow plenum chamber and a secondary air flow plenum chamber fluidly connected to the main air flow chamber, and locating the primary and secondary air flow plenum chambers above the main air flow chamber;

providing a wall dividing the primary air flow plenum chamber from the secondary air flow plenum chamber;

drawing air through the main and primary air flow plenum chambers;

drawing air through the main and secondary air flow plenum chambers;

and

providing balanced primary and secondary air flows in the marking engine.

8. The method of claim 7, further comprising thermodynamically adjusting the air flows.